CLAIM AMENDMENT(S)

1. (original) One or more processor-accessible media comprising processor-executable instructions that, when executed, direct a device to perform actions comprising:

comparing an accuracy indicator to at least one threshold, the accuracy indicator corresponding to a reference macroblock selected for a target macroblock;

ascertaining a refinement case from a plurality of refinement cases based on the comparing, each refinement case of the plurality of refinement cases defining a plurality of test points in relation to the reference macroblock; and

analyzing the ascertained refinement case with regard to the target macroblock.

2. (original) The one or more processor-accessible media as recited in claim 1, wherein the accuracy indicator comprises a sum of absolute differences (SAD) value.

3. (original) The one or more processor-accessible media as recited in claim 1, wherein the action of comparing comprises an action of:

comparing the accuracy indicator to at least two thresholds.

4. (original) The one or more processor-accessible media as recited in claim 3, wherein the at least two thresholds comprise a first threshold that is set between 3500 and 4500 and a second threshold that is set between 5500 and 6500.

5. (original) The one or more processor-accessible media as recited in claim 3, wherein the at least two thresholds comprise a first threshold and a second threshold, with the second threshold greater than the first threshold; and wherein the action of comparing further comprises an action of:

determining whether the accuracy indicator is less than the first threshold, is greater than the first threshold but less than the second threshold, or is greater than the second threshold.

6. (original) The one or more processor-accessible media as recited in claim 1, wherein the action of ascertaining comprises an action of:

ascertaining the refinement case from the plurality of refinement cases responsive to a range of values in which the accuracy indicator falls.

7. (original) The one or more processor-accessible media as recited in claim 1, wherein the plurality of refinement cases comprises a first refinement case, a second refinement case, and a third refinement case.

8. (original) The one or more processor-accessible media as recited in claim 7, wherein the first refinement case comprises a first collection of test points in a cross pattern that are one pixel from a central pixel, the second refinement case comprises a second collection of test points in a cross pattern and in an "X" pattern that are one pixel from a central pixel, and the third refinement case comprises a third collection of test points in a cross pattern and in an "X" pattern that are two pixels from a central pixel.

9. (original) The one or more processor-accessible media as recited in claim 1, wherein the action of analyzing comprises actions of:

determining a respective accuracy indicator for each respective test point of the ascertained refinement case to create a collection of accuracy indicators; and

selecting the best accuracy indicator from the collection of accuracy indicators, the selected best respective accuracy indicator associated with its respective test point.

10. (original) The one or more processor-accessible media as recited in claim 9, comprising the processor-executable instructions that, when executed, direct the device to perform a further action comprising:

forwarding a motion vector that corresponds to the respective test point that is associated with the selected best respective accuracy indicator.

11. (original) The one or more processor-accessible media as recited in claim 9, wherein the collection of accuracy indicators includes an accuracy indicator of the central pixel, wherein the accuracy indicator of the central pixel is the accuracy indicator corresponding to the reference macroblock selected for the target macroblock.

12. (original) The one or more processor-accessible media as recited in claim 1, comprising the processor-executable instructions that, when executed, direct the device to perform a further action comprising:

determining a set of accuracy indicators for a set of motion vector candidate predictors with regard to the target macroblock.

13. (original) The one or more processor-accessible media as recited in claim 12, comprising the processor-executable instructions that, when executed, direct the device to perform a further action comprising:

selecting the best accuracy indicator from the set of accuracy indicators, the selected best accuracy indicator comprising the accuracy indicator corresponding to the reference macroblock selected for the target macroblock.

14. (original) The one or more processor-accessible media as recited in claim 12, wherein the set of motion vector candidate predictors comprises three motion vectors plus a null vector.

15. (original) The one or more processor-accessible media as recited in claim 12, wherein the set of motion vector candidate predictors comprises at least one motion vector that is temporally related to the target macroblock and spatially identical and at least one motion vector that is spatially related to the target macroblock and temporally identical.

16. (original) The one or more processor-accessible media as recited in claim 12, wherein the set of motion vector candidate predictors comprises: (i) a first motion vector that is from a first macroblock that is adjacent to the target macroblock and within a current frame thereof; (ii) a second motion vector that is from a second macroblock that is adjacent to the target macroblock and within the current frame, but orthogonally located with respect to the first motion vector, and (iii) a third motion vector that is from a third macroblock that is aligned with the target macroblock but located in a reference frame.

17. (original) The one or more processor-accessible media as recited in claim 1, wherein the processor-executable instructions comprise at least part of video encoding software.

18. (original) The one or more processor-accessible media as recited in claim 1, wherein the one or more processor-accessible media comprise at least one of (i) one or more storage media and (ii) one or more transmission media.

19. – 31. (canceled)

32. A device comprising:

a candidate selector that is capable of accepting a current macroblock, the candidate selector adapted to select a motion vector candidate from a set of motion vector candidates with regard to the current macroblock using an accuracy indicator corresponding to the selected motion vector candidate;

a refinement case ascertainer that is capable of accepting the selected motion vector candidate and the accuracy indicator corresponding thereto, the refinement case ascertainer adapted to ascertain a refinement case from among a plurality of refinement cases based on a first threshold and a second threshold and responsive to the accuracy indicator; and

a refinement case analyzer that is capable of accepting the ascertained refinement case, the refinement case analyzer adapted to analyze a collection of points defined by the ascertained refinement case with regard to the current macroblock to potentially refine the selected motion vector candidate.

33. (original) The device as recited in claim 32, wherein the candidate selector is further capable of accepting a current frame that includes the current macroblock.

34. (original) The device as recited in claim 32, wherein the candidate selector is further capable of accepting a reference frame, the candidate selector configured to extract reference macroblock candidates from the reference frame in accordance with the set of motion vector candidates.

35. (original) The device as recited in claim 34, wherein the candidate selector is further configured to determine a respective accuracy indicator for each of the reference macroblock candidates; the candidate selector further adapted to select the selected motion vector candidate by selecting the motion vector candidate corresponding to a best respective accuracy indicator.

36. (original) The device as recited in claim 32, wherein the set of motion vector candidates consists of three motion vectors and a null vector.

37. (original) The device as recited in claim 32, wherein the set of motion vector candidates comprises two motion vectors from two macroblocks that are temporally identical and spatially contiguous to the current macroblock and one motion vector from one macroblock that is spatially identical and temporally contiguous to the current macroblock.

38. (original) The device as recited in claim 32, wherein the device further comprises:

an accuracy indicator determiner that determines accuracy indicators for reference macroblocks from a reference frame with regard to the current macroblock of a current frame.

39. (original) The device as recited in claim 38, wherein the accuracy indicator determiner comprises a sum of absolute differences (SAD) determiner.

40. (original) The device as recited in claim 32, wherein the plurality of refinement cases comprises a first case, a second case, and a third case; and wherein the refinement case ascertainer is configured to implement the following selection criteria:

if the accuracy indicator is less than the first threshold, then the first case is ascertained;

if the first threshold is less than the accuracy indicator which is less than the second threshold, then the second case is ascertained; and

if the accuracy indicator is greater than the second threshold, then the third case is ascertained.

41. (original) The device as recited in claim 40, wherein the refinement case analyzer is further adapted (i) to analyze the first case, when ascertained by the refinement case ascertainer, by testing four contiguous points at the selected motion vector candidate on a cross direction, (ii) to analyze the second case, when ascertained by the refinement case ascertainer, by testing eight contiguous points around the selected motion vector candidate, and (iii) to analyze the third case, when ascertained by the refinement case ascertainer, by testing eight points that are around and that are two pixels away from the selected motion vector candidate.

42. (original) The device as recited in claim 32, wherein each refinement case of the plurality of refinement cases defines a plurality of test points.

43. (original) The device as recited in claim 32, wherein the refinement case ascertainer is configured to associate a respective refinement case of the plurality of refinement cases to a respective range of accuracy values of a plurality of ranges of accuracy values, the plurality of ranges of accuracy values at least partially delineated by the first threshold and the second threshold; wherein the refinement case ascertainer is further adapted to ascertain the ascertained refinement case by ascertaining the respective range of accuracy values of the plurality of ranges of accuracy values in which the accuracy indicator belongs.

44. (original) The device as recited in claim 32, wherein the refinement case analyzer is further adapted to refine the selected motion vector candidate when an accuracy indicator corresponding to a point of the collection of points is better than the accuracy indicator corresponding to the selected motion vector candidate.

45. (original) The device as recited in claim 32, wherein the collection of points includes a plurality of test points and a central pixel that corresponds to the selected motion vector candidate.

46. (original) The device as recited in claim 32, wherein the refinement case analyzer is configured to select a best accuracy indicator from a collection of respective accuracy indicators created for respective points of the collection of points.

47. (original) The device as recited in claim 32, wherein the device further comprises:

a discrete cosine transform (DCT) component that performs integer DCT calculations on residual error values in a video encoding operation.

48. (original) The device as recited in claim 32, wherein the device further comprises:

an inverse discrete cosine transform (IDCT) component that performs integer IDCT calculations on transformed and quantized residual error values in a video encoding operation.

49. (original) The device as recited in claim 32, wherein the device comprises a mobile device having a wireless interface.

50. – 96. (canceled)